

SUPPORT FOR THE AMENDMENT

Support for the amendment to claims 1-4 and 6 is found on page 11, lines 2-13 of the specification as well as in claim 5 as originally presented. Support for claim 7 is found on page 5, lines 16-18 of the specification. Support for claim 8 is found on page 5, lines 22-24 of the specification. Support for claim 9 is found on page 6, lines 4-5 of the specification. Support for claim 10 is found on page 6, lines 14-15 of the specification. Support for claim 11 is found on page 7, lines 19-20 of the specification. Support for claims 12 and 13 is found on page 11, lines 12-15 of the specification. Support for claim 14 is found on page 11, line 26 through page 12, line 3 of the specification. Support for claim 15 is found on page 18, lines 2-4 of the specification. Support for claim 16 is found on page 9, lines 9-11 of the specification. Support for claims 17-18 is found on page 11, lines 19-23 of the specification. Support for claims 19-20 is found on page 15, lines 2-7 of the specification. Support for claim 21 is found on page 14, lines 12-13 of the specification. No new matter would be added to this application by entry of this amendment.

Upon entry of this amendment, claims 1-4 and 6-21 will now be active in this application.

REQUEST FOR RECONSIDERATION

The claimed invention is directed to a foamed oil-in-water type emulsion comprising unsaturated fatty acid containing diglycerides.

Foamed oil-in-water type emulsions are commonly found as food compositions. Diglyceride containing compositions have received interest in view of disclosed beneficial health effects. Incorporation of diglyceride compositions into foamed oil-in-water type emulsions such as ice cream coatings and frozen sweets is desired. However, good foaming

characteristics have not always been observed. Accordingly, a diglyceride containing foamed oil-in-water type emulsion having good foaming properties is sought.

The claimed invention addresses this problem by providing a foamed oil-in-water type emulsion comprising an oil phase comprising 30-90 wt.% of diglycerides which comprises at least 80 wt. % of unsaturated fatty acids and a water phase comprising 5-80 wt.% of a sugar and/or sugar alcohol, the emulsion having a specific gravity of from 0.1-0.9 g/cm³. Applicants have discovered that sugars and/or sugar alcohols are effective at providing a good foamed oil-in-water type emulsion of an unsaturated fatty acid containing diglyceride. Such a foamed emulsion is no where disclosed or suggested in the cited prior art of record.

The rejections of claims 1-5 under 35 U.S.C. § 102(b) or in the alternative under 35 U.S.C. § 103(a) over Nomura et al. EP 402,090 alone and in view of Ono, U.S. 5,962,058, Lichtenstein et al. are respectfully traversed.

None of the cited prior art of record discloses or suggests a composition comprising 5-80 wt.% of sugar and/or sugar alcohol in a foamed oil-in-water type emulsion of an unsaturated fatty acid containing diglyceride.

Nomura et al. describes an edible oil-in-water emulsion comprising a diglyceride mixture. As noted by the examiner, the aqueous phase is described as possibly containing a seasoning such as salt, sugar, vinegar, fruit juice, organic acids or salts thereof, a flavoring material and/or a colorant (page 4, lines 23-34). There is no disclosure of an amount of 5-80 wt.% of sugar in the aqueous phase nor of the emulsion having a specific gravity of 0.1-0.9 g/cm³. Example 2 of the reference illustrates an emulsion for dressing comprising only 1.7 wt.% of sugar in the aqueous phase an amount which is well below the claimed range of 5-80 wt.% of sugar in the aqueous phase.

In contrast, the claimed invention is directed to a foamed oil-in-water type emulsion comprising 3-50 wt.% of an oil phase comprising 30-90 wt.% of diglyceride which comprises at least 80 wt. % of unsaturated fatty acid and 5-97 wt.% of a water phase comprising 5-80 wt.% of a sugar and/or sugar alcohol, the emulsion having a specific gravity of 0.1-0.9 g/cm³. Applicants note, the claims have been amended to recite an amount of sugar and/or sugar alcohol of 5-80 wt.% and that the emulsion has a specific gravity of from 0.1-0.9 g/cm³. As the reference fails to disclose or suggest an amount of sugar and/or sugar alcohol of 5-80 wt.% nor that the emulsion has a specific gravity of from 0.1-0.9 g/cm³, the claimed invention is clearly neither anticipated nor made obvious from this reference.

The cited reference is not concerned with the problem of stabilization of a foamed oil-in-water type emulsion of an unsaturated fatty acid containing diglyceride. There is clearly no recognition that an amount of 5-80 wt. % of sugar and/sugar alcohol in the aqueous phase would effectively stabilize such an unsaturated fatty acid containing diglyceride foamed emulsion. Sugar is merely present as a flavoring of any emulsion without any suggestion of the benefits to foam stabilization with an amount of 5 to 80 wt. %. Applicants have discovered that an amount of 5-80 wt. % of sugar and/or sugar alcohol is effective at stabilizing a foamed emulsion of an oil-in-water type emulsion of an unsaturated fatty acid containing diglyceride. The claim limitations of an amount of 5-80 wt. % of a sugar and/or sugar alcohol in combination with a foamed composition are claim limitation which are not disclosed or suggested by the reference. Since the reference only generically describes oil-in-water emulsions of diglycerides without recognizing the benefits of an amount of 5 to 80 wt. % of sugar and/or sugar alcohol to a **foamed** composition, the claimed invention is clearly neither anticipated nor made obvious by this reference.

Applicants further note, that the dressing of example 2 of Nomura et al. cannot be foamed by whipping and that this reference has nothing to do about the advantages

recognized by the inventors of the use of a sugar and/or sugar alcohol in the stabilization of a foamed oil-in-water type emulsion of a diglyceride containing oil phase.

Accordingly withdrawal of the rejections under 35 U.S.C. § 102(b) and 35 U.S.C. § 103(a) are respectfully requested.

Ono et al. fail to describe a foamed oil-in-water type emulsion in which the diglyceride component comprises at least 80 wt.% of **unsaturated** fatty acids.

As noted by the Examiner, Ono et al. describes a foamable emulsion comprising sugar and a sugar alcohol (see Abstract). However, the reference fails to describe such a composition in which at least 80 wt.% of the fatty acids of the diglyceride are unsaturated fatty acids. To the contrary, the reference describes that at least 60% but less than 100%, more preferably 70% or less 100% by weight and particularly preferably 80% by weight or more but less than 100% of the fatty acids of the diglyceride are **saturated** fatty acid moieties (column 4, lines 17-26). There is no suggestion of a stable foamed emulsion of an unsaturated fatty acid containing diglyceride. Thus the claim limitation of at least 80 wt. % of unsaturated fatty acids is a claim limitation which is not suggested by the reference.

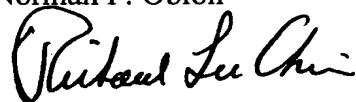
Moreover, the differences in structure between saturated fatty acid containing diglyceride and unsaturated fatty acid containing diglyceride would provide no motivation to use the teachings of Ono et al. in the composition of Nomura et al. Even further there would be no expectation of successfully forming a stable foamed emulsion of an unsaturated fatty acid containing diglyceride oil-in-water emulsion based on the differences in structures between a saturated fatty acid containing diglyceride and an unsaturated fatty acid containing diglyceride. As the reference fails to disclose or suggest a composition comprising at least 80 wt.% of unsaturated fatty acids in the diglyceride, the claimed invention is clearly not made obvious by this disclosure.

Lichtenstein et al. has merely been cited to describe the preference of the cis form of fatty acids as compared with the transform based on the disclosed effect on the serum lipoprotein cholesterol level. However, this reference fails to disclose or suggest an amount of 5-80 wt.% of sugar and/or sugar alcohol in the aqueous phase of a foamed oil-in-water type emulsion in which the diglyceride comprises at least 80% by weight of unsaturated fatty acids. As the prior art fails to disclose or suggest an amount of 5-80 wt.% of sugar and/or sugar alcohol nor that such sugar alcohol would be effective at stabilizing an unsaturated fatty acid containing diglyceride oil phase, the claimed invention is clearly neither anticipated nor rendered obvious from these references and accordingly withdrawal of the rejections under 35 U.S.C. § 102(b) and 35 U.S.C. § 103(a) is respectfully requested.

Applicants submit that this application is now in condition for allowance and early notification of such action is earnestly solicited.

Respectfully submitted,

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